CHUKHAR'KO, Z.; SHEFER, G.; PETROVA, N.

Ways for reducing expenditures in receiving, processing, and storing corn. Muk.-elev. prom. 29 no.9:13-15 S '63. (MIRA 17:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov yego pererabotki.

DEMIN, G., kand.tekhn.nauk; DZHOROGYAN, G., kand.tekhn.nauk; MEL'NIK, B., kand. tekhn.nauk; CHUKHAR'KO, Z., kand.ekonom.nauk

Improvement of the technology of postharvest processing of grain. Muk.-elev. prom. 28 no.8:6-8 Ag '62. (MIRA 17:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov yego pererabotki.

CHUKHAR'KO, Z.; USHAKOV, T.; SHEKHTMAN, Kh.

Using linear programming in planning the conveying of grain loads. Muk.-elev. prom. 29 no.12:14-15 D '63. (MIRA 17:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov yego pererabotki.

CHUKHAR'KO Z.T.

VORONTSOV, O.S.; GOLIK, M.G.; DELIDOVICH, V.N.; KLNYEV, I.A.; KOZ'-MINA, N.P., doktor biologicheskikh nauk, professor; SOSEDOV, N.I. FESTA, N.Ya.; CHUKHAR'KO, Z.T.; GEL'MAN, D.Ya., redaktor; LA-BUS, G.A., tekhnicheskiy redaktor.

[Grain storage; management and equipment] Organizatsiia i tekhnika khraneniia zerna. Moskva, Izd-vo tekhn. i ekonomicheskoi lit-ry, 1954. 358 p. [Microfilm] (MLRA 7:10)

(Grain--Storage)

CHUKHAR'KO, ZOTIK TIKHONOVICH

Organizatsiya I Planirovaniye Raboty Zagotovitel'nogo Punkta Zagotzerno (Organization and Planning of Work in Warehouses for Storing Grain) Moskva, Zagotizdat, 1955.

234 p. Diagrs., Tables.

Bibliography: p. (232)

T.

CHUKHAR'KO,Z.; MEL'NIK,B.; SILINA,S.

Ways of reducing the cost of mechanical ventilation of grain. Muk.-elev.prom. 21 no.4:7-8 Ap '55. (MLRA 8:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov yego pererabotki
(Grain--Storage)

CHUKHAR'KO, Z.; SHEKHTMAN, Kh.

Make effective use of machinery in grain procurement stations.
Muk.-elev.prom. 22 no.5:3-5 My '56. (MIRA 9:9)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov ego pererabotki.
(Grain elevators) (Grain-handling machinery)

Chukhar'ko, Z. T.

CHUKHAR'KO, Z.T., kand. ekon. nauk.

Economic problems of the drying of grain. Trudy MTIPP no.7:163-183 '57. (MIRA 10:12)

(Grain--Drying)

CHUKHAR'KO, Z.T.; KOPTEV, K.; SHEKHTMAN, Kh.; SHEFER, G.; BELYAKOVA, N.

For an effective network of permanent grain procurement stations. Muk.-elev.prom.23 no.8:18-21 Ag '57. (MIRA 10:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov yego pererabotki.

(Grain trade)

ZHIGALOV, A.N., kand. ekon. nauk; CHUKHAR'KO, Z.T., kand. ekon. nauk, retsenzent; LYUBUSHKIN, V.T., kand. tekhn. nauk, spetsred.; FUKS, V.K., red.; KISINA, Ye.I., tekhn. red.

[Utilization of the capital assents of state-owned rural mills] Ispol'zovanie osnovnykh fondov gosudarstvennykh sel'skokhoziaistvennykh mel'nits. Moskva, Pishcheprom izdat, 1958. 122 p. (MIRA 11:8)
(Flour mills)

118-58-5-13/18

AUTHORS: Chukhar'ko, Z.T., Candidate of Economic Sciences, and Stroyeva, V.P., Engineer

TITLE: Mechanization and Automation of Productional Processes at Mills (Mekhanizatsiya i avtomatizatsiya proizvodstvennykh protsessov na mel'nitsakh)

PERIODICAL: Mekhanizatsiya Trudoyëmkikh i Tyazhëlykh Rabot, 1958, Nr 5 pp 37-39 (USSR)

ABSTRACT: The automation of the flour industry is one of the foremost problems. The fact that over 4,000 of the more than 80,000 mills are roll mills, facilitates matters. However, not all the mills are equally prepared for automation. The elevators have complex mechanization. The Moscow elevator of the Mel' kombinat Nr 4 (Flour Combine Nr 4) is the first flour elevator with a completely centralized automatic control. Its capacity is 72,000 t of grain. At most of the mills, the sewing-up and weighing of the bags is done by manual labor, and the removal of the bags to the storage places is accomplished on hand carts. This makes necessary the introduction of a combined apparatus fully mechanizing the operations. For the

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Mechanization and Automation of Productional Processes at Mills

grain storage rooms, piling machines and machines for breaking up the stacks should be brought into use. At other mills the production process has attained the highest stage of mechanization. Experience has shown that pneumatic transport at the mills is easier to regulate with the help of automatic devices and improves work conditions. According to data from Promzernproyekt, the conversion of the mills to pneumatic transport decreases the necessary area by 25-30% reducing the cost of building by 15-20%. The article contains a flow sheet of the pneumatic installation's work as elaborated by the Vsesoyuznyy nauchno-issledovatel'skiy institut zerna (All-Union Scientific-Research Institute of Grain). The author describes the technological process of milling in the USSR, and mentions the advantages automation will bring to the mills. The All-Union Scientific-Research Institute of Grain has designed a sensitive cell of a membrane type serving as an indicator of clogging-up and failures arising in the milling machines. The device signals to the control desk, and automatically stops and starts the rolling machines. There is

118-58-5-13/18

Mechanization and Automation of Productional Processes at Mills

one photo.

AVAILABLE: Library of Congress

Card 3/3 1. Flour mills-Operation 2. Foods-Processing 3. Flour mills-Automation-USSR

CHUKHAR'KO, Z.; SHEKHTMAN, Kh.; RADOV, A.

Introducing a new system of management at the Orenburg Grain Receiving Station No.2. Muk-elev.prom. 62 no.1:12-14 Ja '59. (MIRA 12:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov yego pererabotki.
(Orenburg--Grain elevators)

PLATONOV, A.; CHUKHAR'KO, Z., kand.ekon.nauk; SHEKHTMAN, Kh., kand.ekon.nauk

Efficient distribution of grain procurement stations. Muk.-elev.prom. 26 no.1:8-9 Ja '60. (MIRA 13:6)

1. Gosudarstvennyy komitet Soveta Ministrov SSSR po khleboproduktam (for Platonov). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna (for Chukhar'ko, Shekhtman).
(Grain elevators)

BELOZEROV, G.; BORODIN, A.; KAGAN, A.; PLATONOV, A.; CHUKHAR'KO, Z.

Methods of determining the economic effictiveness of investments in the grain storing and milling industry. Muk.-elev. prom. 26 no.10:21-23 0'60. (MIRA 13:10)
(Grain--Storage) (Grain milling)

RADOV, A.; CHUKHAR'KO, Z.; SHEKHTMAN, Kh.

Simplifying the system of management in grain receiving stations. Biul. nauch. inform.: trud i zar. plata 4 no.9:16-18 '61. (MIRA 15:1)
(Donets Basin--Coal mines and mining--Production standards)

RADOV, A.; CHUKHAR'KO, Z.; SHEKHTMAN, Kh.

Simplifying the system of management in grain receiving stations. Biul. nauch. inform.: trud i zar. plata 4 no.9:18-22 '61. (MIRA 15:1)

(Grain--Storage)

CHUKHAR'KO, Z., kand.ekonomicheskikh nauk; DEMIN, G., kand.tekhn.nauk

Problems of extablishing continuous grain receiving and processing lines. Muk.-elev. prom. 27 no.8:14-15 Ag '61. (MIRA 14:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov yego pererabotki.
(Grain elevators)
(Grain-handling machinery)

CHUKHAR'KO, Z.; SHEKHTMAN, Kh.; RADOV, A.; NAKAZNOY, I., starshiy inzh.; AKIF'YEV, V. (Gor'kovskaya obl.)

Improve the organization of work in different sections of the grain receiving enterprises. Muk.-elev. prom. 27 no.9:11-16 S '61. (MIRA 15:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov yego pererabotki. 2. Normativno-issledovatel'skaya stantsiya Ministerstva zagotovok Kazakhskoy SSR (for Nakaznoy).
(Granaries)
(Grain elevators)

PLATONOV, A.; CHUKHAR'KO, Z.

Improve the management of grain receiving enterprises.
Muk.-elev. prom. 27 no.10:23-25 O '61. (MIRA 14:12)

1. Gosudarstvennyy komitet zagotovok Soveta Ministrov SSSR (for Platonov). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov yego pererabotki (for Chukhar'ko).
(Grain elevators)

SIL'CHENKO, O.; CHUKHAR'KO, Z.

Economic accountability at industrial sections. Muk.-elev. prom. 29 no.1:11-12 Ja '63. (MIRA 16:4)

1. Armavirskiy mel'nichnyy kombinat (for Sil'chenko).
2. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov yego pererabotki (for Chukhar'ko).
(Armavir--Flour and feed trade--Accounting)

CHUKHAROV, V.A., inzhener.

Calculation of the adiabatic process in gaseous mixtures according to the tables for thermodynamic properties of gases. Teploenergetika 4 no.8:82-83 Ag '57. (MIRA 10:9)
(Gases, Kinetic theory of)

CHUKHCHIN, N F.

CHUKHCHIN, N. F.

"Study of Aging Processes in Crankcase Oil During Operation of D-35 Motors (Serial, and with Cylinders of Larger Diameter)." Min Higher Education USSR, Moscow Inst of Mechanization and Electrification of Agriculture imeni V. M. Molotov, Chair "Fuels and Lubricants," Moscow, 1955. (Dissertation for the Degree of Candidate in Technical Sciences)

SO: M-955, 16 Feb 56

Chykhchin, V. D.

20-3-49/52

AUTHOR: Chukhchin, V. D.

TITLE: Pelagic Rapana Larva in the Black Sea (O pelagicheskoy lichinke rapany v Chernom more).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 3, pp. 533-534 (USSR)

ABSTRACT: The Rapana bezoar L. larva has been traced in the Black Sea only in 1947. Now it has spread from the Bay of Novorossiysk and from the coast of gruziya westward to the Crimea (Yalta, Sevastopol'). It is a greedy robber and a great danger for the oyster- and sea mussel-banks as well in the Far East as in the Black Sea. From the spinning package of the Rapana typical "Veliger"-larvae (Fig.1) hatch, which live at least one month pelagic. This is contradictory to the statements by Drapkin (Ref.1), which says that they burrow themselves immediately into the sand. Their development and the structure of the velum as well as of the shell are discribed. The larvae are met at all horizons, from 0 up to 14 m (on the ground). Two more Rapana species in Asia also have a pelagic-living larva. In the Bay of Sevastopol Rapana-larvae have been caught from July to October. In the aquarium they started propagating in June and finished at the beginning of October. According to

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20-3-49/52

Pelagic Rapana Larva in the Black Sea

Thorson (Ref.7) the plankton-larvae of the animals settling on the ground are divided into three groups: 1. and 2. planktotrophic larvae; group 1. with a short pelagic life, group 2. with a long pelagic life. 3. group: lecitotrophic larvae, which dispose of enough vitellus to be independant of plankton nutrition. Newly hatched larvae have only little vitellus. Their lecitotrophic period lasts 6 to 7 days, afterwards they depend on plankton and detritus nutrition. Thus the older Rapana larvae are to be placed under the second group. The phenomenon of a free-floating pelagic stage together with a high fecunditiy obviously favors their rapid and wide propagation in the Black Sea.
There are 1 figure, and 7 references, 3 of which are Slavic.

ASSOCIATION: Biologic Station imeni A. O. Kovalevskiy, AN USSR, Sevastopol' (Sevastopol' skaya biologicheskaya stantsiya im. A. O. Kovalevskogo Akademii nauk SSSR)

Card 2/3

On the Pelagic Rapana Larva in the Black Sea 20-3-49/52

PRESENTED: July 19, 1957, by Ye. N. Pavlovskiy, Academician

SUBMITTED: December 14, 1956

AVAILABLE: Library of Congress

Card 3/3

CHUKHCHIN, V.D.

Order Saccoglossa (Gastropoda, Opistobranchia) in the Black Sea.
Trudy SBS 13:89-91 '60. (MIRA 14:3)
(Black Sea--Opisthobranchiata)

CHUKHCHIN, V.D.

Pelagic gastropod larvae in the Black Sea. Trudy SBS 13:92-113 '60.
(MIRA 14:3)

(Black Sea-- Gastropoda) (Larvae--Mollusks)

CHUKHCHIN, V.D.

Reproduction of Rapana bezoar L. in the Black Sea. Trudy SBS 14:163-168 '61. (MIRA 15:4)
(Black Sea--Gastropoda)

CHUKHCHIN, V.D.

Growth of Rapana bezoar L. in the Bay of Sevastopol. Trudy SBS 14:169-177 '61. (MIRA 15:4)
(Sevastopol, Bay of--Gastropoda)

CHUKHCHIN, V.D.

Rapana bezoar L. in the Gudauty oyster beds. Trudy SBS 14: 178-187 '61. (MIRA 15:4)
(Gudauty region--Gastropoda)

CHUKHCHIN, V.D.

Quantitative distribution of benthos in the eastern part of the Mediterranean Sea. Trudy SBS 16:215-223 '63.
(MIRA 17:6)

CHUKHCHIN, V.D.

Quantitative data on benthos of the Tyrrhenian Sea. Trudy SBS 17:48-50 '64. (MIRA 18:6)

SOSNIN, I.Ya.; BERKOVICH, M.Yu.; CHUKHIN, A.A.

Introducing machinery in the blending process. Tekst. prom. 18 no. 7:31-33 Jl '58. (MIRA 11:7)

1. Zamestitel' predsedatelya Ul'yanovskogo sovnarkhoza(for Sosnin). 2. Glavnyy inzhener upravleniya legkoy promyshlennosti Ul'yanovskogo sovnarkhoza(for Berkovich). 3. Glavnyy mekhanik Morshanskoy sukonnoy fabriki(for Chukhin).
(Textile machinery)

L 15394-66 EWT(m)/EWP(j)/T RM

ACC NR: AP6000968 (A) SOURCE CODE: UR/0286/65/000/022/0053/0054

AUTHORS: Chukhin, A. A.; Polyakov, I. V.; Ulybin, M. G.; Kapustin, G. V. 17 B3

ORG: none

TITLE: A press for vulcanizing rubber products. Class 39, No. 176382 announced by All-Union Scientific-Research Institute of Rubber-Industrial Mechanical Engineering (Vsesoyuznyy nauchno-issledovatel'skiy institut rezino-tekhnicheskogo mashinostroyeniya)

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 22, 1965, 53-54

TOPIC TAGS: drive, rubber technology, rubber vulcanization, pressure apparatus, manufacturing facility, manufacturing method

ABSTRACT: This Author Certificate presents a press for vulcanizing rubber products, for example, rubber-metal gaskets. The press includes devices for the withdrawal and opening of the dies (see Fig. 1). These devices are made in the form of horizontally positioned guides fastened to the plates of the press. The guides carry a sliding die which travels with the help of a cylinder. The upper rotating part of the die is connected to the base of the press by hinged arms. The design is intended to increase the productivity of labor. The press contains mechanisms for loading the stock material and removing the finished products. These mechanisms are in the form of a vacuum cartridge connected by a hinge joint to the cylinder and are

Card 1/3 UDC: 678.058.39

L 15394-66
ACC NR: AP6000968

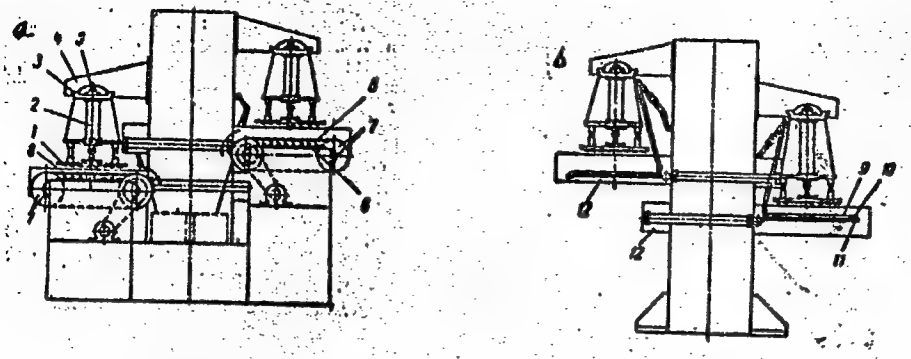

Fig. 1. 1 - Vacuum cartridge; 2 - cylinder; 3 - carriage; 4 - support; 5 - screw couple; 6 - spindle magazine; 7 - conveyer; 8 - conveyer belt of specified length; 9 - middle part of die; 10 - projections on the middle section; 11 - catches; 12 - guides of the press.

rigidly connected by coupled screws to the carriage moving on the guides of the support. To automate the processes of loading the stock materials and removing the finished product, spindle magazines for the stock materials are used in the press. These magazines are mounted on the frames. The press also uses conveyers, along the loops of which are fastened conveyer belts of a specified length. The

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ACC NR: AP6000968

dies of the press consist of three hinge-fastened parts. The middle sections of these dies are made with projections which interact with the catches fastened to the guides of the press. Orig. art. has: 1 figure.

SUB CODE: 11,13/ 14/ SUBM DATE: 22Aug63

PC

Card 3/3

CHUKHIN, B.A.; DAVYDOV, V.I.

Advantage of "B" collar threaded joints. Razved. i okh. nedr 27 no.6:42 Je '61. (MIRA 14:9)

1. Vorkutinskaya kompleksnaya geologorazvedochnaya ekspeditsiya (for Chukhin).

(Boring machinery)

CHUKHIN, N.K.

Subject : USSR/Electricity AID P - 2006

Card 1/1 Pub. 27 - 10/31

Author : Chukhin, N. K., Kand. of Tech. Sci., Moscow

Title : Graphic and analytical method of building static characteristics of synchronous machinery

Periodical : Elektrichestvo, 4, 46-49, Ap 1955

Abstract : The method is based on the replacement of non-linear relations of physical magnitudes by proportional ones and on the use of parametric equations of non-saturated synchronous machinery. This method is applicable to machines with salient and non-salient poles. The author gives numerical examples and finds that the magnitude of error of the simplified method does not exceed 8 per cent of the result obtained by the exact method. The author recommends wide use of the simplified method in engineering practice. Two numerical examples, 4 diagrams.

Institution: Moscow Power Engineering Institute im. Molotov

Submitted : No date

ЭТИ ХАИ, N 4.

AUTHOR: Chukhin, N.K., Candidate of Technical Sciences. 105-9-22/32
Dotsent.

TITLE: On the Incorrectness of Making Use of Potier's Vector Diagram for the Investigation of Exterior Pole Synchronous Machines. (Ob oshibochnosti primeneniya vektornoy diagrammy Pot'ye dlya issledovaniya yavnopolyusnykh sinkhronnykh mashin)

PERIODICAL: Elektrichestvo, 1957, Nr 9, pp. 73-73 (USSR)

ABSTRACT: The methods by Blondel and Potier are given in textbooks for the construction of vector diagrams for electrical machines. Blondel's vector diagram applies in those cases in which the various reactances exist in the longitudinal- and lateral axis machines, i.e. it is suited for exterior pole machines. For internal pole machines Potier's diagram is applied, which represents a special case of Blondel's diagram in the case of equality of the reactances in both axial directions. In some textbooks, however, nevertheless Potier's diagram is recommended also for exterior pole machines as results obtained are very near reality. Here the reason for this chance agreement is shown and it is proved that the angles Θ and Θ_b will differ essentially in both diagrams. Calculation of a corresponding example is carried out. There are 7 Slavic references.

Card 1/2

105-9-22/32

On the Incorrectness of Making Use of Potier's Vector Diagram for the Investigation of Exterior Pole Synchronous Machines.

ASSOCIATION: Moscow Institute for Energetics. (Moskovskiy energeticheskiy institut).

AVAILABLE: Library of Congress

Card 2/2

CHUKHIN, N.Ye.

The concept of the cylindricality of the human body and its practical application in heliotherapy. Vop.kur.fizioter. i lech.fiz.kul't. 21 no.3:28-33 Jl-S '56. (MLRA 9:10)

1. Zaveduyushchiy otdeleniyem sanatoriya Ministerstva vysshego obrazovaniya, Sochi.
(SUN BATHS)

CHUKHIN, N.Ye.

Organization of work on beaches used for therapeutic purposes by sanatoriums and in solariums. Vop. kur. fizioter. i lech. fiz. kul't. 25 no. 3:211-215 My-Je '60. (MIRA 14:4)

1. Iz sanatoriya "Nauka" v Sochi.
(SUN BATHS)

CHUKHIN, N.Ye. (Sochi)

Shadow screens attached to cots rotatable by the patients during sun baths. Vop.kur., fizioter. i lech. fiz. kul't 30 no.5:451-455 S-O '65. (MIRA 18:12)

CHUKHIN, O.I.

Some problems in the improvment of the productive work of pupils in the teacher's work practice. Nauk. zap. Nauk.-dosl. inst. psykhol. 11:163-165 '59. (MIRA 13:11)

1. Pedagogicheskiy institut, Simferopol'.
(Mental discipline)

CHUKHIN, S.G.

15

PHASE I BOOK EXPLOITATION SOV/5717

Moscow. Inzhenerno-fizicheskiy institut.

Pribory i metody analiza izlucheniy; sbornik nauchnykh rabot, vyp. 2. (Apparatus and Methods for the Analysis of Radiation; Collection of Scientific Papers, no. 2) Moscow, Atomizdat, 1960. 166 p. 4000 copies printed.

Sponsoring Agency: Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya RSFSR. Moskovskiy inzhenerno-fizicheskiy institut.

Ed. (Title page): Ye. L. Stolyarova, Candidate of Physics and Mathematics; Tech. Ed.: S. M. Popova.

PURPOSE: This collection of articles is intended for specialists in nuclear physics, dosimetry of nuclear radiations, and shielding.

COVERAGE: The articles were prepared by scientists of MIFI (Moscow Physics and Engineering Institute) and presented at the 1957 conference of the Institute. Brief annotations to the articles have been included in the Table of Contents. No personalities are mentioned. References follow each article.

Card 1/#

S/796/62/000/003/002/019

AUTHORS: Stolyarova, Ye. L., Chukhin, S.G., Konstantinov, I. Ye., Mis'kevich, A.I.

TITLE: Investigation of the angular-spectrum distributions of scattered γ-radiation in protective barriers in the case of a plane single-directional source.

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Pribory i metody analiza izlucheniy. no.3. 1962, 15-36.

TEXT: A theoretical and experimental approach is undertaken to obtain systematic knowledge on the process of transition of γ-rays through protective barriers of finite dimensions and not, as heretofore, through a homogeneous and infinite medium from an isotropic punctuate source or from a plane directional source. The process is characterized in terms of the γ-quanta flux density $N(\vec{r},\Omega,E)$, customarily termed the angular energy distribution of the radiation. The function N permits a determination of a number of important characteristics of a multiply scattered radiation, such as: (1) The energy-intensity spectrum; (2) the angular intensity distribution; (3) the energy-accumulation (storage) factor. A review is made of existing experimental investigations reported by 5 Western and 2 Soviet group of authors. The present investigation comprises measurements with scintillation-type γ-spectrometers of the angular energy distributions at points lying in the far (downstream)

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boundary plane of a barrier. Co^{60} sources were used with Al, Fe, and Pb media. Angular intensity distributions of the scattered γ-radiation were obtained, and a comparison was made between the differential γ-ray energy spectra obtained with an Al barrier of a thickness $\mu_0 d = 1$ and 3.8 and those obtained theoretically for an infinite geometry. The desired function N depends on the barrier thickness, the angle θ between the direction of the primary γ quanta and the direction of the scattered γ quanta near the given point, and on the energy E of the scattered γ quanta. The experimental equipment used, consisting of a fixed NaI(Tl) crystal, 70x48 mm, and a rotatable source-and-barrier rig, is described. The spectrometer effectiveness, its resolution, and details of the photoamplifier and the 100-channel pulse-amplitude analyzer ("Raduga") are reported. The barrier dimensions were 75x75 cm. The plane, single-directional Co^{60} source was simulated by a punctuate source located at a fairly great distance (to obtain nearly uniform radiation intensity on the barrier). Experimental results and data-processing methods. The amplitude distribution of the impulses was measured for a finite number of scattering angles. Corrections were introduced to obtain a true γ-ray spectrum: 1. The "dead" time of the spectrometer, which was a specific defect of the 100-channel amplifier employed, in which the "dead" time was a function of the amplitude of the input impulse. 2. The background, obtained by subtracting the impulse spectrum found by closing the detector collimator with a lead rod from the impulse spectrum

measured with the collimator open. 3. The true γ-quantum spectrum as obtained from the measured impulse-amplitude distribution. The solution of the integral equation involved in this problem has been accomplished variously (Lidén, K., et al., Arkiv för Fys., no. 7, 1954, 5; Whyte, G.N., NBS Report no. 1003, 1952) and is here performed by transforming the integral equation into a system of interrelated linear equations. The method of this analysis of the spectrum, including the determination of the matrix elements required therefor and the construction of the matrix, is explained in detail. 4. The spectrometer-effectiveness correction, including the effectiveness of the spectrometer at the photopeak, i.e., the ratio of the number of impulses at the photopeak by the number of γ-quanta that impinge on the crystal, and the correction for the effective solid angle of the collimator. 5. The energy-resolution correction. The results of the measurements are set forth. It was found that all angular energy distributions of the scattered γ-radiation, regardless of the atomic number Z and the angle θ, have a maximum that corresponds to the energy of single scatter over a minimal angle. The shape of the angular energy distribution indicates that the energy-dissipating role of multiple scatter increases with increasing angle θ and decreasing atomic number Z of the medium. Substantial differences between experimental and theoretical spectra occurred for low energies only; this is attributed to the lack of backscatter with real barrier geometry. In the low-energy range an atomic-number-dependent multiple-scatter

peak was observed; this peak was shifted toward the higher energies with increasing atomic number. In Fe and Pb an exponential dependence of the angular distribution was confirmed. A comparison was made between the energy-intensity spectra of Al and the theoretically calculated spectra of γ-radiation scattered in an infinite aqueous medium (Goldstein, H., et al., U.S.A. AEC Report no. 40, 1954, 3075)*. There are 6 figures and 11 references (3 Russian-language Soviet and 8 English-language).

ASSOCIATION: None given.

*Abstracter's note: Presumably AEC Report NYO-3075, 1954.

S/796/62/000/003/018/019

AUTHORS: Stolyarova, Ye. L., Chukhin, S.G., Larichev, A.V.

TITLE: Equipment for the measurement of complex low-intensity γ-spectra.

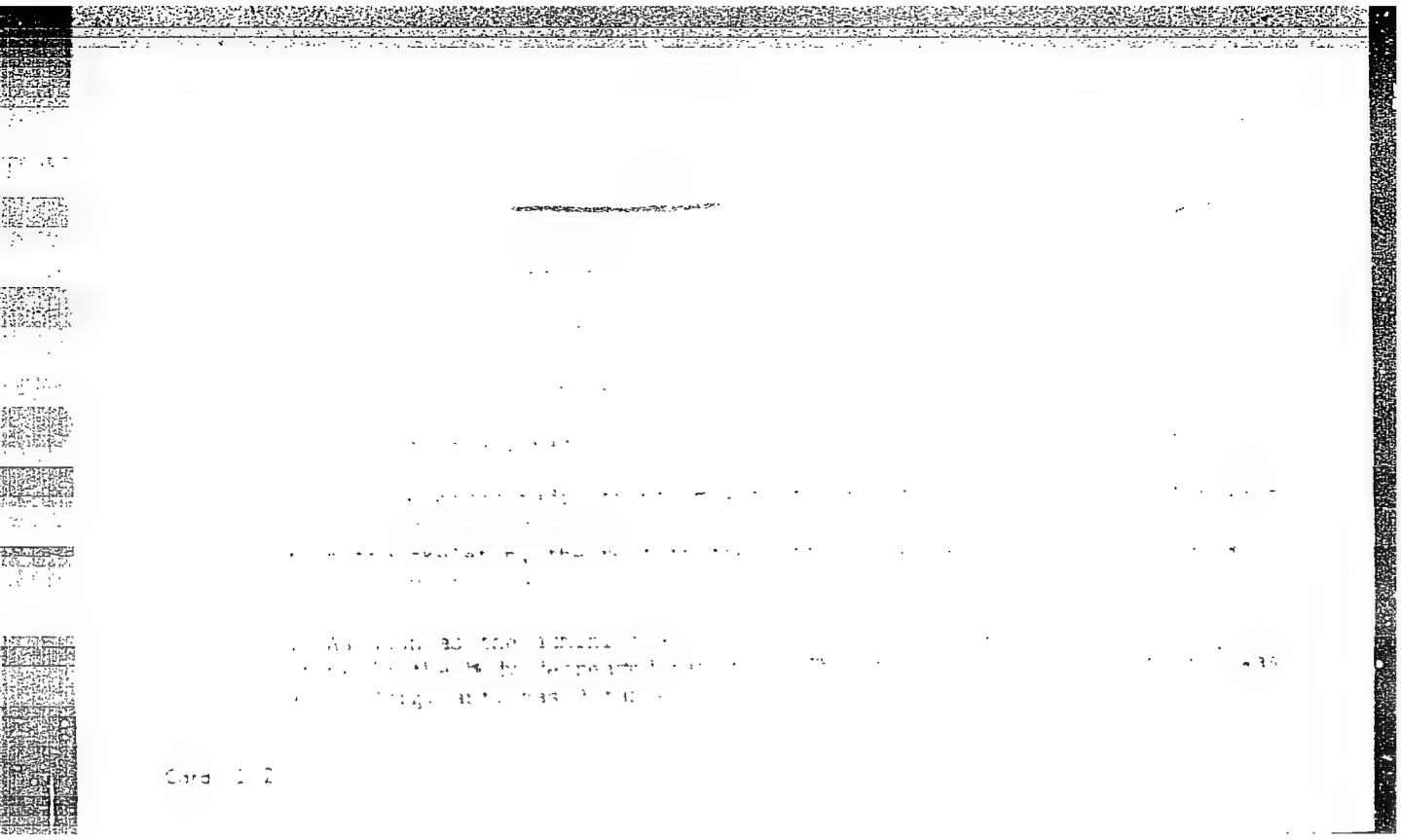
SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Pribory i metody analiza izlucheniy. no.3. 1962, 181-185.

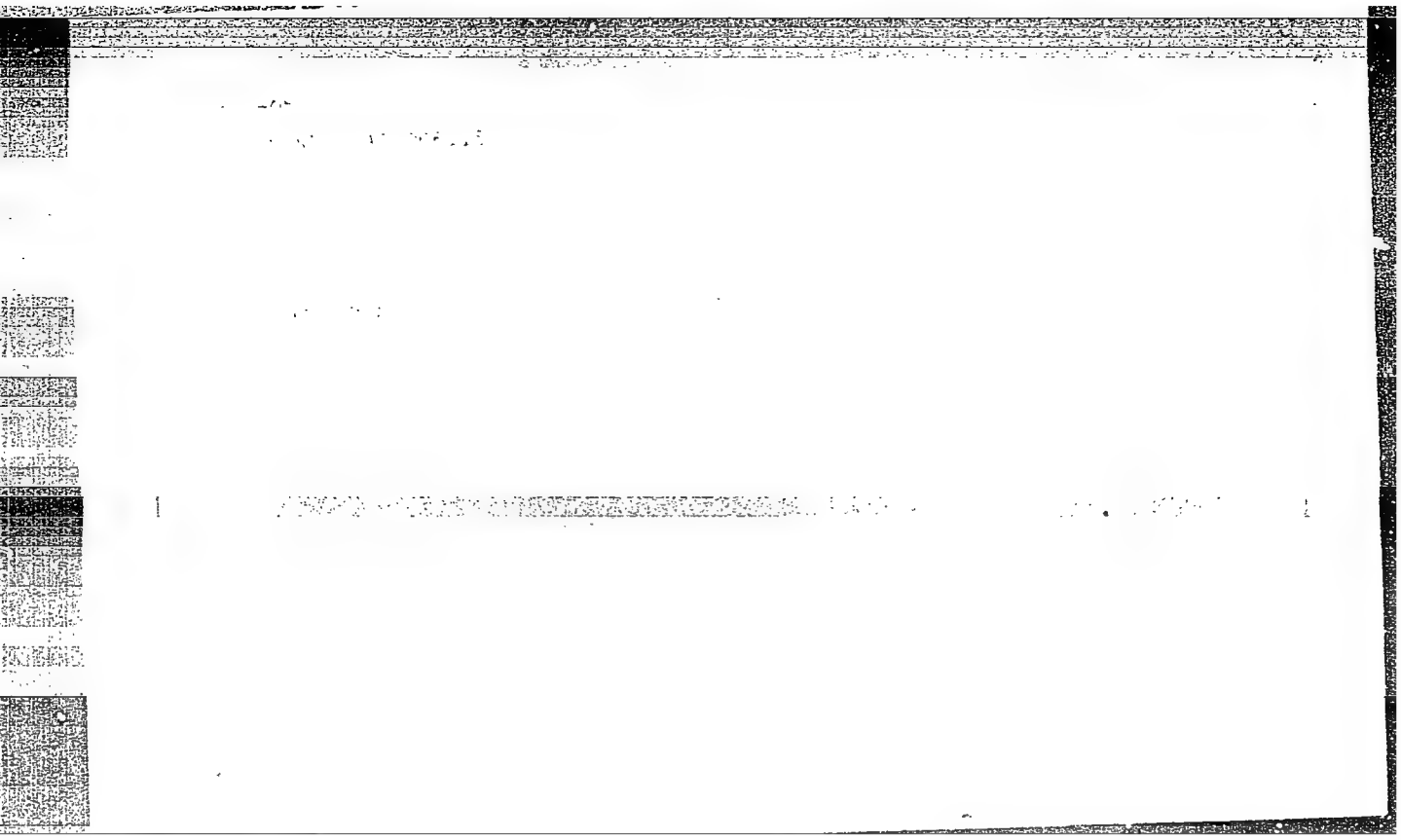
TEXT: A single-crystal scintillation γ-spectrometer was assembled for the experimental investigation of the passage of γ-rays through matter. A block diagram is shown. The remote portion of the spectrometer consists of a NaI(Tl) crystal, 80x80 mm, and a photoelectronic multiplier (PhM) ФЭУ-1Б (FEU-1B) with a 70-mm diam cathode, all enclosed in a Pb housing. The side shield of the housing, assembled of interlocking Pb bricks, is no less than 150 mm, that of the frontal wall (the collimator)no less than 300 mm thick. Collimators of 10, 20, 30, and 50-mm diam can be inserted for work with sources of various intensities (cross-section shown). The pulses pass from the anode load of the PhM to a zero-overload preamplifier and then onto the linear amplifier of the "Kashtan" equipment. A 100-channel analyzer is utilized. A special voltage divider serves to feed the electrode of the PhM with independent potential regulation on several electrodes (focusing system) to enhance the energy resolution. For example, for γ-rays of Cs^{137} (0.661 mev) a 9.5% energy resolution is attained, which is comparable to that

Card 1/2

reported by J.Kockum (Nucl.Instrum., v.4, no.3, 1959, 171). The use of a large NaI(Tl) crystal ensures an elevated registration effectiveness (80% for 1-mev γ-rays, no less than 50% for 10-mev γ-rays); the heavy shielding reduces the background to about 15 pulses/sec. The stability of the equipment is good: 1.5-2% variation per day on the energy scale. The energy peak is also highly load-stable; a change in integral count from 500 to 5,000 pulses/sec engenders a shift in the peak of less than 2%. The instrument thus offers good promise for the measurement of complex γ-spectra over a broad range of energies and intensities, the measurement of the spectra of scattered γ-rays, and the performance of quantitative and qualitative isotope analysis, etc. A comparison is made between the elaboration of the amplitude spectrum of the γ-rays of equilibrium radium for Compton distribution as measured on the present equipment and D. Peirson's measurements (Nature, v.173, 1954, 990); the individual lines obtained with the present equipment are found to be defined more sharply. Spectra of the intensity of γ-rays from a Co^{60} source, scattered at angles of 20, 50, and 70° in a 16-cm thick Fe barrier, are also shown. There are 7 figures and the 2 above-cited English-language U.S. references.

ASSOCIATION: None given.





L 43079-66 EWT(m)/EWP(w)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/HW

ACC NR: AR6014375 (A,N) SOURCE CODE: UR/0137/65/000/011/D005/D006

AUTHORS: Pavlov, A. M.; Zuyev, B. M.; Chukin, V. V.; Trifonova, R. G.; Kashkina, L. N.

TITLE: Formation of elastic-plastic properties of steel cables

SOURCE: Ref. zh. Metallurgiya, Abs. 11D39

REF SOURCE: Sb. Stal'n. kanaty. Vyp. 2. Kiyev, Tekhnika, 1965, 355-359

TOPIC TAGS: wire, wire product, rupture strength, flow stress

ABSTRACT: Increasing the degree of deformation of surface layers during straightening leads to a decrease of the elastic and flow limits, however, the overall effect achieved by this method is negligible. The increase in the degree of deformation during straightening has a negative effect on the time dependence of rupture strength. Straightening of cable drastically reduces the magnitude of residual tensions in the surface layers of the cable. This explains the observed lowering of the elastic and flow limits. 3 illustrations. L. Kochenova [Translation of abstract]

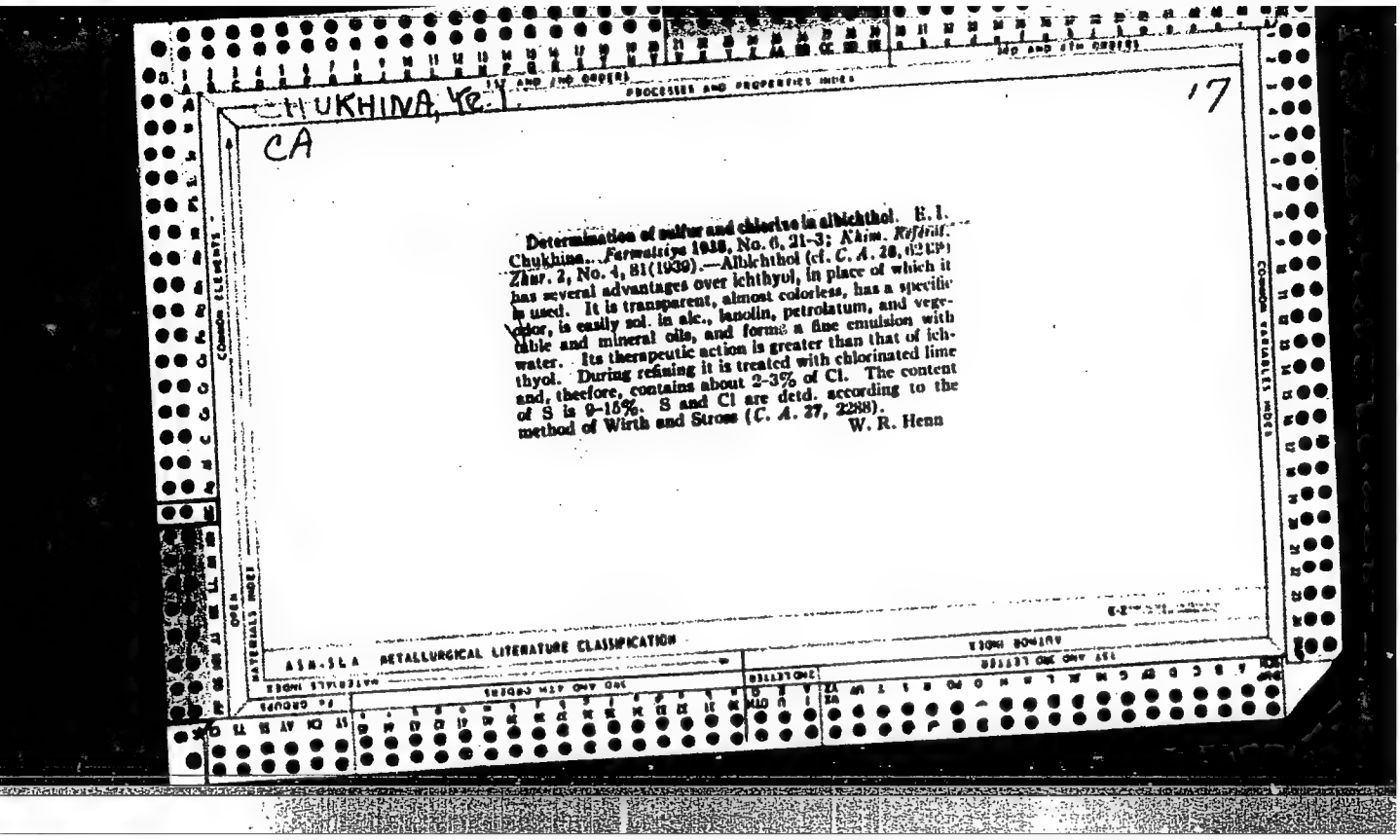
SUB CODE: 11,13,20

UDC: 621.771.001

TRUNIN, I.I.; SOLONOUTS, M.I.; CHUKHINA, L.L.

Evaluation of the stress-rupture strength of materials for long service life. Zav. lab. 29 no.6:752-753 '63. (MIRA 16:6)

1. TSentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya. (Strength of materials)



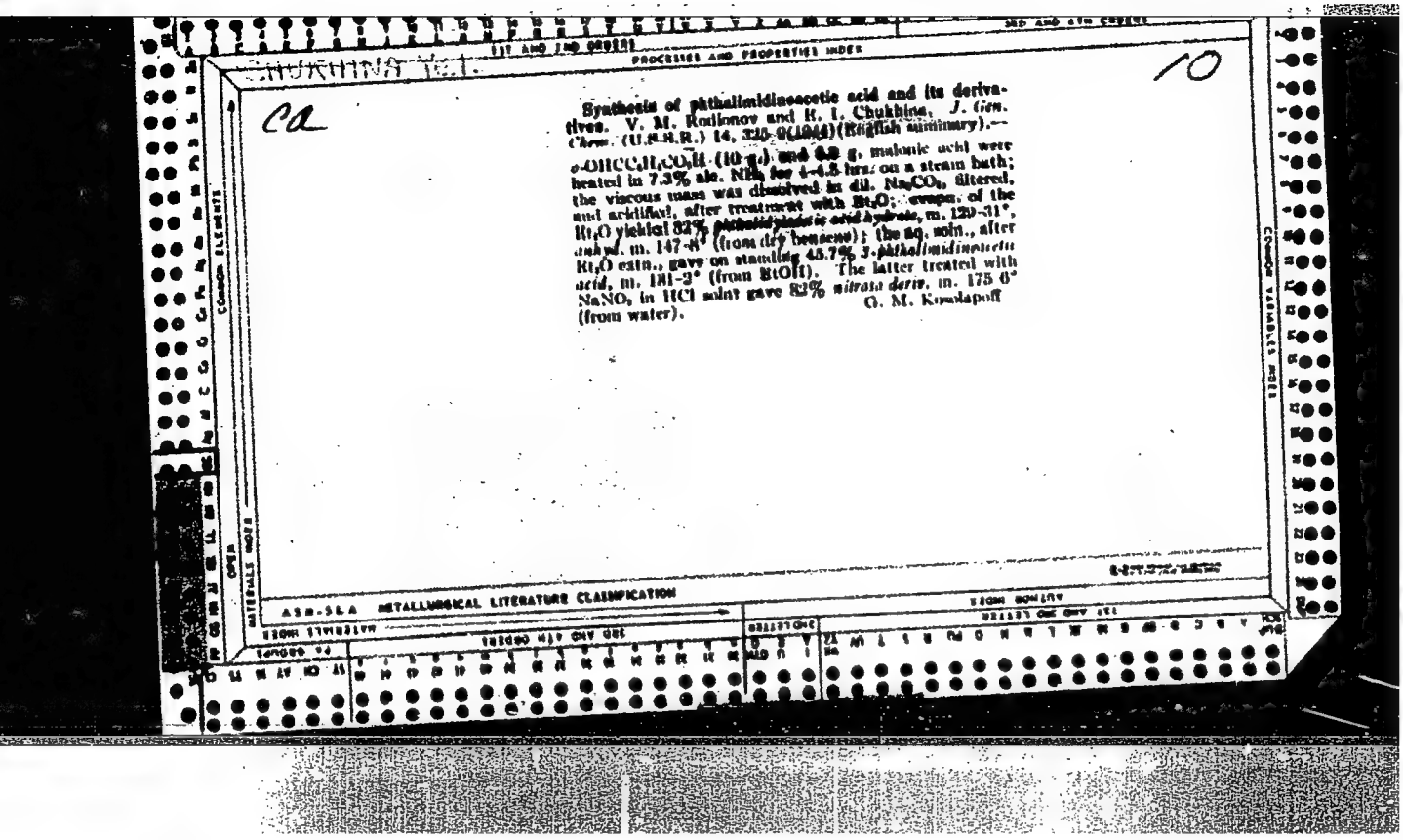
CHUKHINA, Ye.

CA

17

Determination of sulfur and chlorine in albichthol. E. I. Chukhina. *Farmatsiya* 1938, No. 6, 21-3; *Khim. Referat. Zhur.* 2, No. 4, 81(1939).—Albichthol (cf. *C. A.* 28, 6233) has several advantages over ichthyol, in place of which it is used. It is transparent, almost colorless, has a specific odor, is easily sol. in alc., lanolin, petrolatum, and vegetable and mineral oils, and forms a fine emulsion with water. Its therapeutic action is greater than that of ichthyol. During refining it is treated with chlorinated lime and, therefore, contains about 2-3% of Cl. The content of S is 9-15%. S and Cl are detd. according to the method of Wirth and Stross (*C. A.* 27, 2288).

W. R. Henn

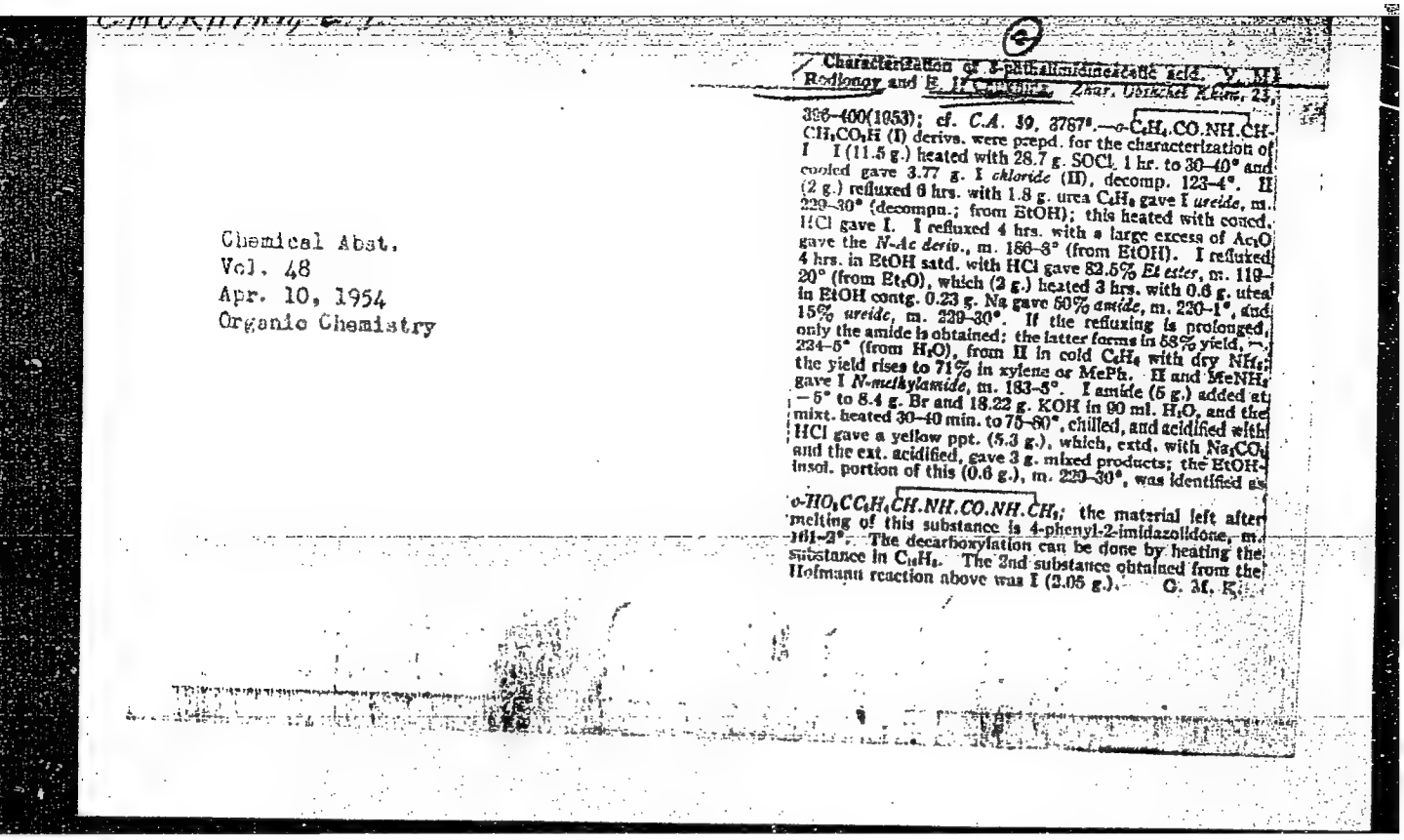


Ca

10

Synthesis of phthalimidinoacetic acid and its derivatives. V. M. Rodionov and R. I. Chukhina. *J. Gen. Chem.* (U.S.S.R.) 14, 329-9(1944)(English summary).—*o*-OHCC$_6$H$_4$CO$_2$H (10 g.) and 6.8 g. malonic acid were heated in 7.5% aq. NH_3 for 4–4.5 hrs. on a steam bath; the viscous mass was dissolved in dil. Na_2CO_3, filtered, and acidified, after treatment with Et_2O; evapn. of the Et_2O yielded 82% phthalimidinoacetic acid hydrate, m. 129–31°, anhyd. m. 147–8° (from dry benzene); the aq. soln., after Et_2O extn., gave on standing 45.7% *3-phthalimidinoacetic acid*, m. 181–2° (from EtOH). The latter treated with $NaNO_2$ in HCl soln gave 82% *nitroso deriv.*, m. 175.6° (from water).

O. M. Kwalapoff



Chemical Abst.
Vol. 48
Apr. 10, 1954
Organic Chemistry

Characterization of 3-phthalimidinepropionic acid. V. [illegible]
Redlonay and E. [illegible] Zhur. Obshchei Khim. 23,

386–400(1953); cf. *C.A.* 39, 3787⁸.—*o*-C_6H_4.CO.NH.$CH_2CH_2CO_2H$ (I) derivs. were prepd. for the characterization of I. I (11.5 g.) heated with 28.7 g. $SOCl_2$ 1 hr. to 30–40° and cooled gave 3.77 g. I *chloride* (II), decomp. 123–4°. II (2 g.) refluxed 6 hrs. with 1.8 g. urea CH_4N_2 gave I *ureide*, m. 229–30° (decompn.; from EtOH); this heated with concd. HCl gave I. I refluxed 4 hrs. with a large excess of Ac_2O gave the *N-Ac deriv.*, m. 166–8° (from EtOH). I refluxed 4 hrs. in EtOH satd. with HCl gave 82.5% *Et ester*, m. 119–20° (from Et_2O), which (2 g.) heated 3 hrs. with 0.6 g. urea in EtOH contg. 0.23 g. Na gave 50% *amide*, m. 230–1°, and 15% *ureide*, m. 229–30°. If the refluxing is prolonged, only the amide is obtained; the latter forms in 58% yield, m. 234–5° (from H_2O), from II in cold C_6H_6 with dry NH_3; the yield rises to 71% in xylene or MePh. II and $MeNH_2$ gave I *N-methylamide*, m. 183–5°. I amide (5 g.) added at −5° to 8.4 g. Br and 18.22 g. KOH in 90 ml. H_2O, and the mixt. heated 30–40 min. to 75–80°, chilled, and acidified with HCl gave a yellow ppt. (5.3 g.), which, extd. with Na_2CO_3 and the ext. acidified, gave 3 g. mixed products; the EtOH-insol. portion of this (0.6 g.), m. 229–30°, was identified as *o*-$HO_2CC_6H_4CH.NH.CO.NH.CH_2$; the material left after melting of this substance is 4-phenyl-2-imidazolidone, m. 161–2°. The decarboxylation can be done by heating the substance in C_6H_6. The 2nd substance obtained from the Hofmann reaction above was I (2.05 g.). G. M. K.

USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61479

Abstract: conditions of formation of IV, whereas IV is converted to V in the presence of NH_3, 11 g I, 11.73 g II and 20 ml 12% alcoholic NH_3 are heated 5 hours on water bath and treated with absolute ether; in residue 1.85 g VI, MP 200-201° (from alcohol); from solution are isolated 15.45 g V, MP 89-90° (from aqueous alcohol). VI is converted by action of $NaNO_2$ H_2SO_4 to I. Condensation of 5 g I with 5.33 g II in 30 ml absolute alcohol + 6 drops piperidine yields 3.2 g ψ ester I. 25 g I, 26.7 g II and 3 g III are heated 10 hours at 107-115°, yield of IV 30.1 g, MP 39-40°. Heating of IV with alcoholic KOH or alcoholic C_2H_5ONa gives o-$HOOCC_6H_4CH = CHCOOH$. IV is not changed on heating to 200°. 2 g IV heated 5 hours on water bath with alcoholic NH_3 gives 1.35 g V, 0.18 g I and 0.31 g IV. 5.45 g methyl ester of I, 5.32 g II and 0.5 g III are heated 10 hours at 107-115° yielding 0.6 g methyl ester of IV, BP 235-237°/8 mm and 2.5 g IV. From 0.2 g methyl ester of IV with 10 ml 37% NH_3 after 2 months gives 0.1 g o-$CONH_2C_6H_4CH = C(CONH_2) - COOC_2H_5$ not melting at 300°.

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CHUKHINA, Ye.I.

Synthesis of o-carboxy and o-carboxydimethoxy-benzal-barbituric acids. Zhur.ob.khim. 28 no.9:2582-2585 S '58. (MIRA 11:11)

1. 2-y Moskovskiy meditsinskiy institut.
(Barbituric acid)

5.3900,5.3610

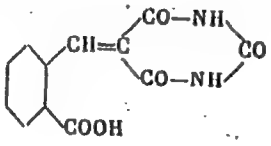
77915
SOV/79-30-2-66/78

AUTHOR: Chukhina, Ye. I.

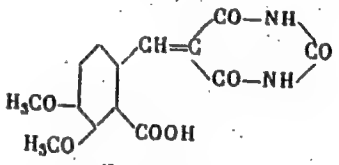
TITLE: Concerning the Isomerization of o-Carboxy- and o-Carboxydimethoxybenzalbarbituric Acid

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 2, pp 662-665 (USSR)

ABSTRACT: This is a continuation of previously published studies (this Journal, 1958, Vol 28, p 2582) on isomeric transformations of o-carboxybenzalbarbituric acid (I) and o-carboxydimethoxybenzalbarbituric acid (II) which represent acid benzal-forms of barbituric acid.



(I)

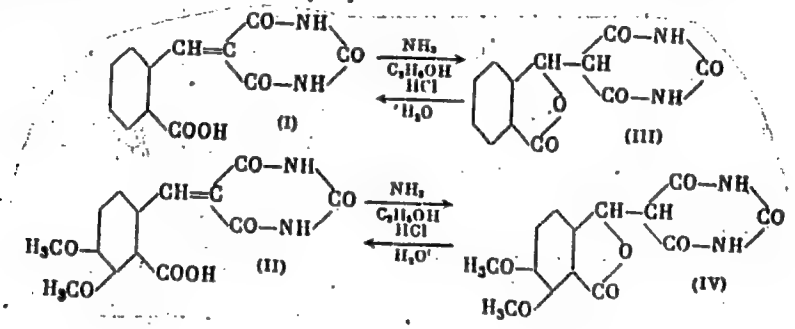


(II)

Condensation of o-aldehydobenzoic acid with barbituric acid in pyridine gave (I), and similar condensation of opianic acid with

Card 1/3

barbituric acid gave (II), both in quantitative yield. Spectral investigation showed that the structures of (I) and (II) were identical with that of the compounds obtained previously (op. cit.) by condensation in an aqueous medium. Heating the benzal-form (I) in ammonia-ethanol solution gave the lactone form (III) (phthalidylbarbituric acid), which on standing for 48 hr at room temperature in dilute HCl reverted into form (I). Similarly, isomerization of (II) gave (IV) (meconylbarbituric acid), which in acid medium reverted to (II).



Concerning the Isomerization of o-Carboxy- and o-Carboxydimethoxybenzalbarbituric Acid

77915
SOV/79-30-2-66/78

Bromophthalide heated with barbituric acid and ethanolic sodium ethoxide gave compound (III) which gave no depression of melting point with (III) obtained as above. IR spectra were taken at the M. V. Lomonossov Moscow Institute of Fine Chemicals Technology using type IKS-11 spectrophotometer. There is 1 figure; and 5 references, 2 U.K., 1 German, 2 Soviet. The U.K. references are: A. F. Tittley, J. Chem. Soc., 2576 (1928); J. F. Grove, H. A. Willis, ibid., 877 (1951).

ASSOCIATION: 2nd Moscow N. I. Pirogov State Medical Institute (2-y Moskovskiy gosudarstvennyy meditsinskiy institut imeni N. I. Pirogova)

SUBMITTED: February 2, 1959

Card 3/3

CHUKHINA, Ye.I.

Alkylation of o-carboxy- and o-carboxydimethoxybenzylbarbituric acids. Zhur.ob.khim. 33 no.6:2033-2036 Je '63. (MIRA 16:7)

1. 2-y Moskovskiy gosudarstvennyy meditsinskiy institut imeni N.I.Pirogova.

(Barbituric acid) (Alkylation)

CHUKHLANTSEV, A.A.

AUTHORS: Rudnyy, N.M., and Chukhlantsev, A.A. 115-5-25/44

TITLE: Increasing the Accuracy of Low Resistance Measurements (Povysheniye tochnosti mer malogo soprotivleniya)

PERIODICAL: "Izmeritel'naya Tekhnika", No 5, Sep-Oct 1957, pp 56-59 (USSR)

ABSTRACT: A method of measuring the resistance of low-resistance reference coils is suggested in view of inadequacy of the presently practiced method of check-up on weak currents, since in work the coils are often used on strong currents. The magnitude of error occurring in this way is calculated on an example of checking of 0.0001 ohm reference coils on a dual bridge and a 0.001 ohm coil with a 30 amp current, and the use of 0.0001 ohm coils with 500 amp current. Despite the need for precise measurements of strong direct currents of several thousand amp, the industry supplies only shunts of class 0.5, and even such accuracy is not always guaranteed. Such errors can reach the magnitude of several per cent. A mathematical analysis of these causes is made. The suggested method of checking low-resistance coils consists in connecting the reference coils into parallel groups. The authors derived an equation for evaluation of the systematic and of the largest possible occasional error in measured resistance

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of a parallel group at given resistances of single measuring coils. They conclude that the load characteristics of low-resistance reference measuring coils have to be determined on a nominal current with the use of a parallel group of reference resistance coils, the potential-terminals of which are connected by special "equalizing" resistance coils (conductors), the resistances of which have to be in proportion with the resistance values of corresponding low-resistance measuring coils. For raising the accuracy of shunts for strong currents it is suggested to apply a pair of potential-terminals on every section of such a shunt and to connect them with conductors, the resistance of which is in proportion with the resistance of the corresponding shunt sections.
The article contains 2 electrical circuit diagrams and one Russian reference.

AVAILABLE: Library of Congress

Card 2/2

CHUKHLANTSEV, A.A.

24(0); 5(4); 6(2) PHASE I BOOK EXPLOITATION SOV/2215

Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii imeni D.I. Mendeleyeva

Referaty nauchno-issledovatel'skikh rabot; sbornik No.2 (Scientific Research Abstracts; Collection of Articles, Nr 2) Moscow, Standartgiz, 1958. 139 p. 1,000 copies printed.

Additional Sponsoring Agency: USSR. Komitet standartov, mer i izmeritel'nykh priborov.

Ed.: S. V. Reshetina; Tech. Ed.: M. A. Kondrat'yeva.

PURPOSE: These reports are intended for scientists, researchers, and engineers engaged in developing standards, measures, and gages for the various industries.

COVERAGE: The volume contains 128 reports on standards of measurement and control. The reports were prepared by scientists of Institutes of the Komitet standartov, mer i izmeritel'nykh priborov pri Sovete Ministrov SSSR (Commission on Standards, Measures, and Measuring Instruments under the USSR Council of Ministers). The participating institutes are: VNIIM - Vsesoyuznyy nauchno-issledovatel'skiy metrologii imeni D.I. Mendeleyeva (All-Union Scientific Research Institute of Metrology imeni D.I. Mendeleyev) in Leningrad; Sverdlovsk branch of this Institute; VNIIK - Vsesoyuznyy nauchno-issledovatel'skiy institut Komiteta standartov, mer i izmeritel'nykh priborov (All-Union Scientific Research Institute of the Commission on Standards, Measures, and Measuring Instruments) created from NIIMP - Moskovskiy gosudarstvennyy institut mer i izmeritel'nykh priborov (Moscow State Institute of Measures and Measuring Instruments) October 1, 1955; VNIIFTRI - Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy (All-Union Scientific Research Institute of Physicotechnical and Radio-engineering Measurements) in Moscow; KhGIMIP - Khar'kovskiy gosudarstvennyy institut mer i izmeritel'nykh priborov (Khar'kov State Institute of Measures and Measuring Instruments); and NGIMIP - Novosibirskiy gosudarstvennyy institut mer i izmeritel'nykh priborov (Novosibirsk State Institute of Measures and Measuring Instruments). No personalities are mentioned. There are no references.

Electric and Magnetic Measurements (Shreskov, Ye.D., Editor, Professor)

Bykov, M.A. (NGIMIP). Apparatus for Checking Standard Inductance Coils and Capacitors and for Measuring the Time Constant of Nonreactive Resistors for 400-500 Ohm 91

Bykov, M.A. (NGIMIP). Apparatus for Measuring the Time Constant of Four-terminal Nonreactive Resistors for 0.001 to Several Ohms 93

Grokhol'skiy, A.I. (NGIMIP). Developing a Standard Measuring Unit, a Set of Standard Capacitance Measures, and a Method for Checking Working Measures of Capacitance From 1 to 50 pf at Frequencies up to 100 Megacycles, and up to 450 pf at Frequencies up to 50 Megacycles 9[illegible]

Rudnyy, N.M., A.Z. Vekaler, A.A. Chukhlantsev, and N.G. Abelin (VNIIM). Using a Single Bridge for Checking Shunts and Low-resistance Gages 96

Kamnik, M.Sh. (NGIMIP). Apparatus for Checking Standard Ammeters and Voltmeters at High Frequencies

Card 19/27

Rudnyy, A.S., and Ye. P. Dubovik (VNIIM), and A.A. Chukhlantsev (Sverdlovsk Branch of VNIIM). Developing Methods and Standard Apparatus for Testing Direct-Current Transformers Type I-58 Under Operating Conditions at 70 Kiloamperes 102

RUMYANTSEV, A.S.; CHUKHLANTSEV, A.A.; DUBOVIK, Ye.P.

Errors in the shunts used for the measurement of large currents. Trudy VNIIM no.38:76-85 '59. (MIRA 13:4)
(Electric measurements)

S/058/62/000/003/005/092
A061/A101

4,2100

AUTHOR: Chukhlantsev, A. A.

TITLE: Calculation of the dimensions of small high-current resistors

PERIODICAL: Referativnyy zhurnal, Fizika, no. 3, 1962, 11, abstract 3A124 ("Tr. in-tov Kom-ta standartov, mer i izmerit. priborov pri Sov. Min. SSSR", 1961, no. 52 (112), 56-67)

TEXT: Formulae for calculating the minimum cross section of the manganin parts of resistors used in high-current circuits as well as their overheating temperature and the dependence of resistance on the current passed through are presented. Calculated results are compared with test data.

[Abstracter's note: Complete translation]

Card 1/1

CHUKHLANTSEV, A.A.

Testing of 158 and 1505 measuring devices. Trudy inst. Kom. stand., mer i izm. prib. no.52:128-137 '61. (MIRA 14:10)

1. Sverdlovskiy vilial Vsesoyuznogo nauchno-issledovatel'skogo instituta metrologii im. D.I. Mendeleyeva.
(Electric meters)

CHUKHLANTSEV, V.G.; ALYAMOVSKAYA, K.V.

Potassium zirconium silicate, its preparation and properties. Zhur. neorg.khim. 9 no.1:216-218 Ja '64. (MIRA 17:2)

1. Ural'skiy politekhnicheskiy institut imeni S.M.Kirova.

CHUKHLANTSEV, V.G.

USSR/Physical Chemistry - Thermodynamics. Thermochemistry. B-8
Equilibrium. Physicochemical Analysis. Phase Transitions

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 3747

Author : Chukhlantsev V.G., Sharova A.K.
Inst : Kiev State University
Title : Solubility Products of Uranyl Arsenates

Orig Pub : Zh. neorgan. khimii, 1956, 1, No 1, 36-41.

Abstract : By the isothermal method at 20° were secured data on the solubility of uranyl arsenates UO_2MAsO_4 (M = H, NH_4, K, Li and Na) in dilute solutions of nitric and sulfuric acid. By utilizing previously derived equations (Babko A.K., Naukovi zapiski KDU, 1935, 4) determination was made of the solubility products of the arsenates under study $[UO_2^{2+}][M^+][AsO_4^{3-}]$, which are (at 20°):

$1.71 \cdot 10^{-24}$ (M = NH_4); $2.52 \cdot 10^{-23}$ (M = K); 1.35 ·

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CHUKHLANTSEV, V.G.

USSR/Physical Chemistry - Thermodynamics. Thermochemistry. B-8
Equilibrium. Physicochemical Analysis. Phase Transitions

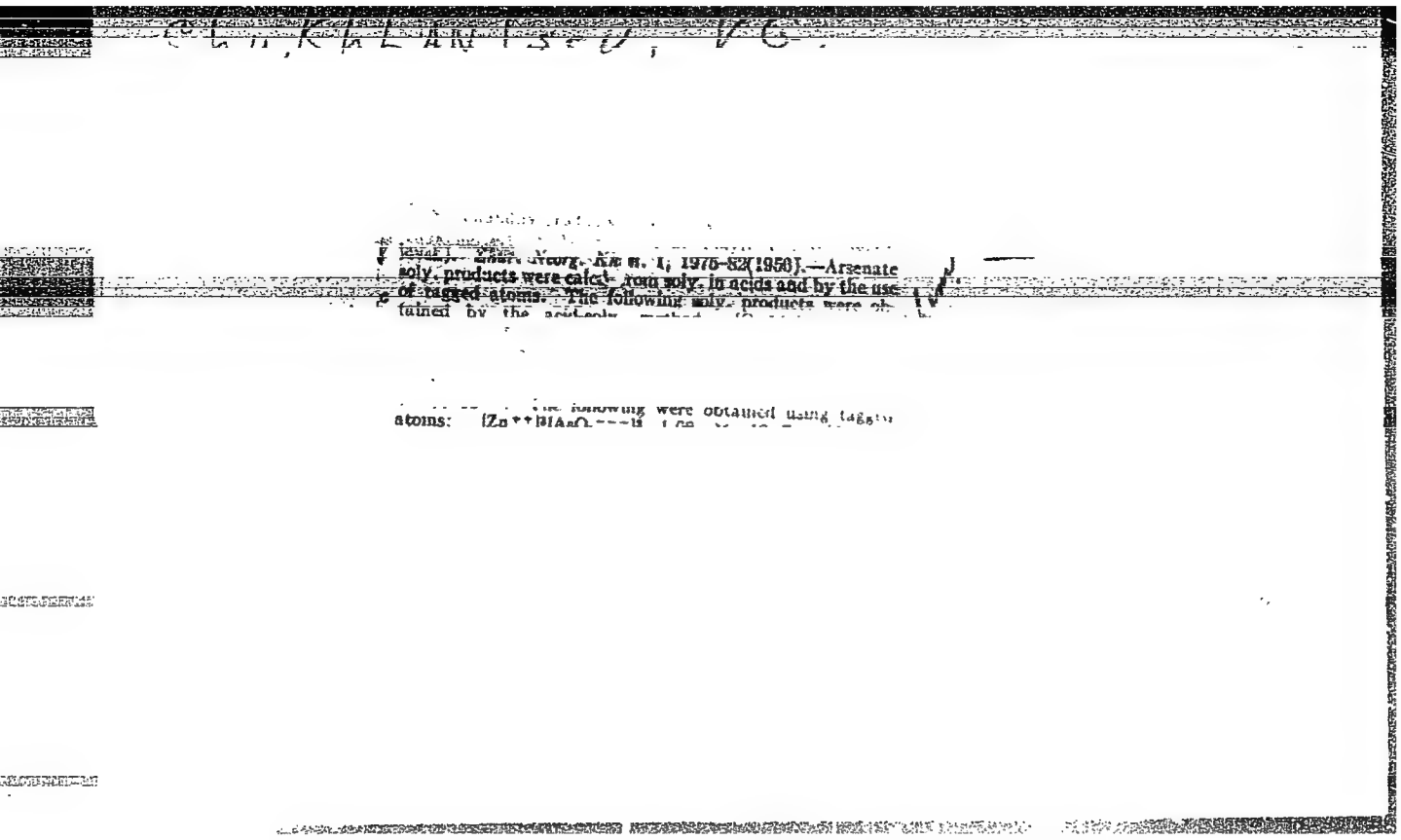
Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 3750

Author : Chukhlantsev V.G., Stepanov S.I.
Inst : Kiev State University
Title : Solubility of Phosphates of Uranyl and Thorium,

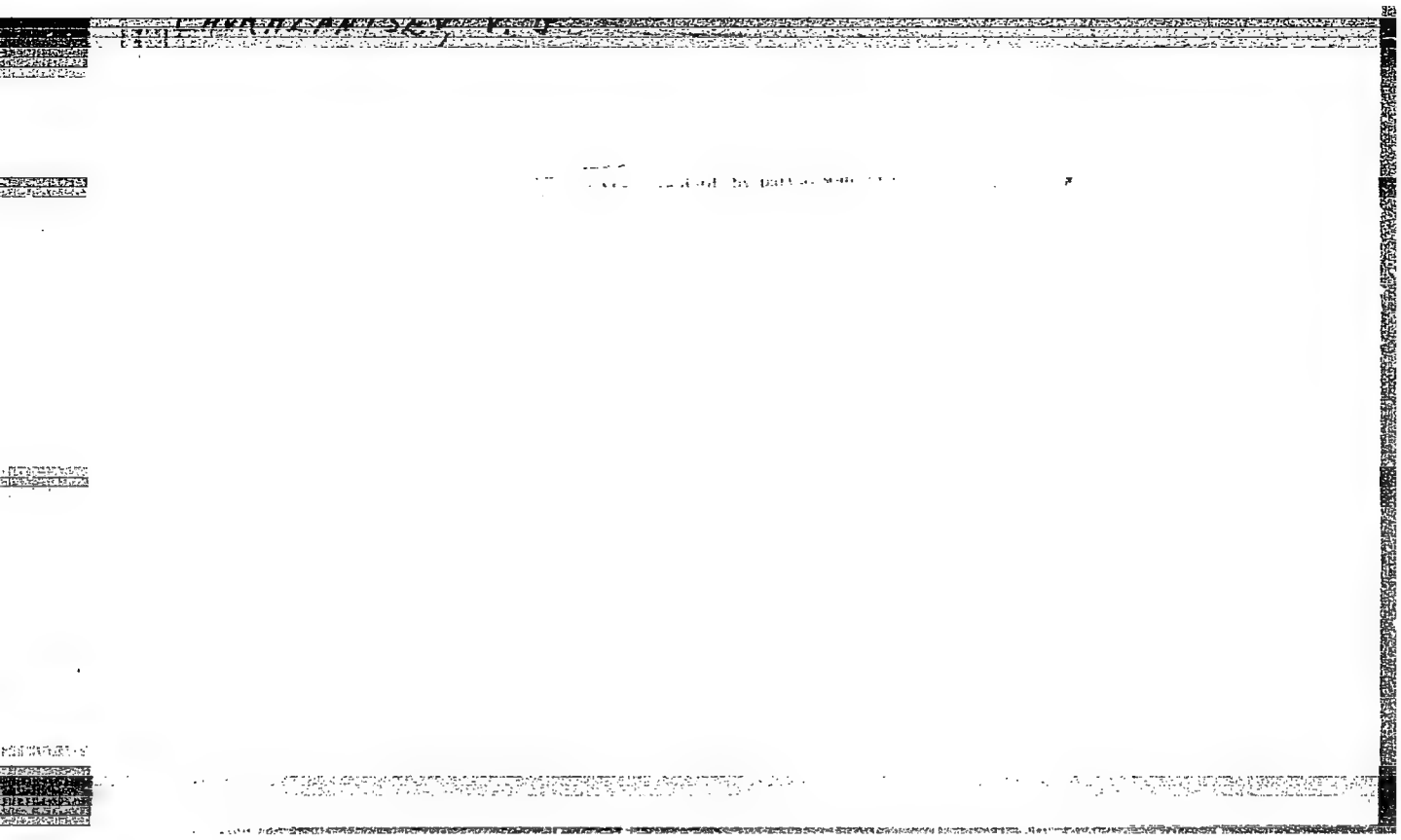
Orig Pub : Zh. neorgan. khimii, 1956, 1, No 3, 478-484

Abstract : Investigation of phosphoric acid compounds of uranyl and thorium by the method of solubility of precipitates in dilute solutions of nitric and sulfuric acid and by the method of tagged atoms, at 19-20°. From the solubility data computed by means of the equations of A.K. Babko (Naukovi zapiski kiivsk. derzh. univ., 1935, 4) the solubility products are: of phosphate of uranyl and ammonia $[UO_2^{2+}][NH_4^+][PO_4^{3-}]$ 4.36 . 10-27; phosphate of uranyl and potassium $[UO_2^{2+}][K^+][PO_4^{3-}]$ 7.76 . 10-24;

Card 1/2



poly. products were calcd. from poly. in acids and by the use of tagged atoms. The following were obtained using tagged atoms: $[Zn^{++}][AsO_4^{---}]_2$



CHUKHLANTSEV, V.G.

Solubility of salts of arsenous acid. Zhur. neorg. khim. 2 no.5: 1190-1193 My '57. (MIRA 10:8)

1. Ural'skiy politekhnicheskiy institut imeni S.M. Kirova.
(Solubility) (Arsenites)

Chukhlantsev V.G

CHUKHLANTSEV, V.G.

Normal titanium sulfate. Zhur.neorg.khim. 2 no.9:2014-2017 S '57. (MIRA 10:12)

1.Ural'skiy politekhnicheskiy institut im. S.M. Kirova.
(Titanium sulfates)

CHUKHLANTSEV, V.G.

USSR/Physical Chemistry - Thermodynamics, Thermochemistry, B-8
Equilibria, Physical-Chemical Analysis, Phase Transitions.

Abs Jour : Referat Zhur - Khimiya, No 1, 1958, 411

Author : V.G. Chukhlantsev, G.P. Tomashevskiy.
Inst :
Title : Solubility of Selenides of Some Metals.

Orig Pub : Zh. analit. khimii, 1957, 12, No 3, 296-301

Abstract : The solubility of selenides of Hg, Ni, Co, Mn, Pb, Fe and Ce in diluted solutions of HNO_3, H_2SO_4 and HCl was studied and their solubility product at 20^0 was computed. The methods of preparation and analysis of the initial selenides are discribed. The methods of carrying out measurements are stated. The solubility products are equal to the following:

Card 1/2

USSR/Physical Chemistry - Thermodynamics, Thermochemistry, Equilibria, Physical-Chemical Analysis, Phase Transitions. B-8

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 411

$L_p[Hg^{2}][SeO_3^{2-}] = (3.8 \pm 2.2).10^{-19}$; $L_p[Ni^{2+}][SeO_3^{2-}] = (1 \pm 0.1).10^{-5}$; $L_p[Co^{2+}][SeO_3^{2-}] = (1.6 \pm 0.8).10^{-5}$; $L_p[Mn^{2+}][SeO_2^{2-}] = (1.2 \pm 0.4).10^{-7}$; $L_p[Pb^{2+}][SeO_3^{2-}] = (3.4 \pm 1.3).10^{-12}$; $L_p[Fe^{3+}][SeO_3^{2-}]^3 = (2 \pm 1.7).10^{-31}$; $L_p[Ce^{3+}][SeO_3^{2-}] = (3.7 \pm 0.3).10^{-29}$.

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CHUKHLANTSEV, V.G.

KRYLOV, Ye.I.; CHUKHLANTSEV, V.G.; CHUNIN, V.S.

Studying solubility in the system tantalum pentoxide - selenic acid-water. Izv.vys. ucheb. zav.; tsvet. met. no.3:97-101 '58.
(MIRA 11:11)

1. Ural'skiy politekhnicheskiy institut. Kafedra khimii i tekhnologii redkikh metallov.
(Systems (Chemistry)) (Solubility)

5(4) SOV/78-4-2-34/40

AUTHORS: Chukhlantsev, V. G., Krylov, Ye. I., Chunin, V. S.

TITLE: Investigation of the System Selenic Acid - Niobium Pentoxide - Water by the Solubility Method (Issledovaniye sistemy selenovaya kislota - pyatiokis' niobiya - voda metodom rastvorimosti)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 2, pp 478-482 (USSR)

ABSTRACT: The solubility of niobium pentoxide in solutions of selenic acid of various concentrations was investigated at temperatures of 25, 50, 75, and 100°C. Purest Nb_2O_5 (99.97%) and selenic acid (99.8%) were used as initial materials. The results show that the solubility of Nb_2O_5 rises with the increase of the concentration of H_2SeO_4. Upon doubling the concentration of selenic acid the solubility of Nb_2O_5 is increased 29 times at 25° and 120 times at 100°. In the system Nb_2O_5-SeO_3-H_2O the solid phase in the concentration range of 14-33 N H_2SeO_4 consists of variously hydrated niobium pentoxide only. This

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Investigation of the System Selenic Acid - Niobium Pentoxide - Water by the Solubility Method

fact was proved by means of the radioactive indicator Co^{60}. The roentgenograms of the solid phases confirm the amorphous character of hydrated niobium pentoxide. Niobium pentoxide gel is hydrated in a 60% selenic acid solution while a hydrate is formed with a composition similar to that of ortho-niobic acid: $H_3NbO_4 \cdot 0.5H_2O$. Upon a further concentration increase of selenic acid this hydrate is dehydrated. There are 1 figure, 3 tables, and 16 references, 7 of which are Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S. M. Kirova (Ural Polytechnic Institute imeni S. M. Kirov)

SUBMITTED: December 3, 1957

Card 2/2

5(4) SOV/76-33-1-1/45

AUTHOR: Chukhlantsev, V. G.

TITLE: Determination of the Dissociation Constants of Arsenic Acid (Opredeleniye konstant dissotsiatsii mysh'yakovoy kisloty)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 1, pp 3-7 (USSR)

ABSTRACT: Several values of the dissociation constants of arsenic acid, obtained by different methods, are mentioned in publications (Refs 1-6). In the present case these constants are calculated on the basis of data on the solubility of difficultly soluble arsenates in strong acids (with a certain concentration of the H^+ ions), and the values of the solubility products (SP) found for the investigated arsenates. The SP values were determined by means of the radioactive indicators Zn^{65}, Sr^{90} and Ag^{110}, and the H^+ ion concentration was measured potentiometrically with a pH meter UNIKhIM with a glass electrode. Strontium arsenate was obtained according to Blarez (Ref 8) and zinc arsenate according to Schulten (Shul'ten) (Ref 7). The dissociation constants for arsenic acid at 20° are given as follows: $K_1 = 2.2.10^{-3}$, $K_2 = 1.3.10^{-6}$, $K_3 = 3.10^{-12}$

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Determination of the Dissociation Constants of Arsenic Acid

The accuracy of the pH determination shows a maximum error of 3-5%; thus, a maximum deviation of 15-40% from the calculated data (Table 8) is possible.
There are 8 tables and 10 references, 1 of which is Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S. M. Kirova, Sverdlovsk (Urals Polytechnical Institute imeni S. M. Kirov, Sverdlovsk)

SUBMITTED: November 15, 1956

CHUGHLANTSEV, V.G.; ALYAMOVSKAYA, K.V.

Solubility products of uranyl, beryllium, and cerium phosphates. Izv.vys.ucheb.zav.;khim.i khim.tekh. 4 no.3:359-363 '61. (MIRA 14:10)

1. Ural'skiy politekhnicheskiy institut imeni S.M. Kirova, kafedra radiokhimii.

(Uranyl phosphate)
(Cerium phosphate)
(Beryllium phosphate)
(Solubility)

CHUKHLANTSEV, V.G.; ALYAMOVSKAYA, K.V.

Solubility of copper, cobalt, nickel, and cadmium phosphates. Izv.vys.ucheb.zav; khim.i khim.tekh. 4 no.5:706-709 '61. (MIRA 14:11)

1. Ural'skiy politekhnicheskiy institut imeni S.M. Kirova, kafedra radiokhimii.

(Phosphates) (Solubility)

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S/078/61/006/006/003/013
B110/B206

15.2100 1142, 1273, 1145

AUTHORS: Chukhlantsev, V. G., Shtol'ts, A. K.

TITLE: Sodium zirconium silicates

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 6, no. 6, 1961, 1332-1337

TEXT: The first production experiment of a zirconium silicate (Ref. 2: Ye. Ye. Kostyleva: Tsirkonosilikaty, Izd-vo AN SSSR, 1936), the sodium zirconium silicate, however unsuccessful, was made by Sheerer, who established that zirconium with soda and caustic soda only produces sodium zirconate and sodium silicate. The authors of the present paper wanted to develop a simple and reliable production method for sodium zirconium silicate. 60% zirconium concentrate crushed to 0.05 mm size, with 0.47 hafnium oxide content, was treated with a mixture of concentrated H_2SO_4 and $(NH_4)_2SO_4$ at 200-220°C, washed out with sulfuric acid containing hydrogen peroxide, and heated for 8 hr with a mixture of sulfuric and hydrofluoric acid. Three methods were used for the synthesis of sodium zirconium silicate: 1) sintering of zirconium with soda; 2) melting of

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Sodium zirconium silicates

zirconium with caustic soda; 3) hydrothermal treatment with soda- or caustic soda solutions at increased temperature under pressure. For 1), the following reactions occurred: $ZrSiO_4 + Na_2CO_3 = Na_2ZrSiO_5 + CO_2$; $ZrSiO_4 + 2\ Na_2CO_3 = Na_2ZrO_3 + Na_2SiO_3 + 2\ CO_2$; $Na_2ZrSiO_5 + Na_2CO_3 = Na_2ZrO_3 + Na_2SiO_3 + CO_2$. The rate of the last two reactions was determined by the sintering temperature and the zirconium/soda ratio. For 2), the reaction at 500-800°C proceeded as follows: $ZrSiO_4 + 4\ NaOH = Na_2ZrO_3 + H_2O$. The authors then melted zirconium (8 parts) with caustic soda (1 part) at lower temperatures under the exclusion of water and carbon dioxide. Unlike zirconium, Na_2ZrO_3 and Na_2ZrSiO_5 are soluble in concentrated HCl. No Na_2ZrSiO_5 was determined during the chemical and roentgenographic analysis of the phase condition of the reaction products. The reaction at 340°C took a quantitative course when 8-10% by weight of water were added prior to melting. Then, 3) was applied: The reaction of zirconium with soda- or caustic soda solutions under hydrothermal

Sodium zirconium silicates

conditions at raised temperature and pressure: crushed zirconium was sealed hermetically in a silver container with soda- or caustic soda solution. The proportion by weight zirconium/solution was chosen in such a way that the Na_2CO_3 and NaOH concentration, respectively, remained practically constant during the experiment. The silver container was placed into a steel autoclave which was partially filled with steel pulp. The autoclave was shaken in an air thermostat. The temperature was kept constant by means of an automatic electronic potentiometer with an accuracy of 1.5°C. The XK (Kh K) thermocouples connected in series served as indicator device. The pulp was preheated for 2-2.5 hr. A device for changing the pressure was not provided. The substance was quantitatively dissolved in water in a beaker and separated from alkali by decanting. The residue washed out in a glass filter with water, acetone and ether was dried at 70°C, and the phase condition of the reaction products was determined chemically and roentgenographically (Tables 3-6). Up to 300°C zirconium does not react with soda solution under hydrothermal conditions, with caustic soda, however, it reacts in a wide temperature- (> 250°C) and concentration range (~ 50%), according to: $ZrSiO_4 + 2NaOH \rightarrow Na_2ZrSiO_5$

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Sodium zirconium silicates

+ H_2O. Thorough crushing and shaking is essential. According to Tables 3-6, sodium zirconium silicate is the reaction product at temperatures < 360°C and NaOH concentrations of 20-65%. The authors recommend for a temperature of 290°C a caustic soda concentration of 60%, a ratio solid : liquid = 1 : 5, a granular size of 0.05 mm and a duration of the process of 15-30 hr. The reaction $ZrSiO_4 + 4\ NaOH = Na_2ZrO_3 + Na_2SiO_3 + 2H_2O$ which takes place with 80% caustic soda (Tables 4 and 5) at a melting temperature of 500-600°C, proceeds under hydrothermal conditions at 275°C. $ZrSiO_4 + 2\ NaOH = Na_2ZrSiO_5 + H_2O$; $Na_2ZrSiO_5 + 2NaOH = Na_2ZrO_3 + Na_2SiO_3 + H_2O$. From this, the effect of water on the beginning of caustic soda melting can be seen. Na_2ZrSiO_5 is stable in the wide temperature- and caustic-soda concentration ranges and is a fine-crystalline white powder insoluble in water. The pycnometric density determination in H_2O, $CH_3C_6H_5$ and CCl_4 produced 3.57 ± 0.05 as a mean value at 20°C. During heating, it is easily soluble in HNO_3, H_2SO_4 and HCl at concentrations > 8%.

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Sodium zirconium silicates

It is slowly broken down by hot water. The measuring accuracy of the roentgenogram amounted to ± 0.1 mm. The intensity of the lines was determined visually. According to the results obtained, Na_2ZrSiO_5 has a complicated crystal lattice. The authors thank Ye. I. Simonov, Yu. F. Gogolev, V. S. Chunin, and Yu. M. Polezhayev for their cooperation. There are 7 tables and 10 references: 2 Soviet-bloc and 8 non-Soviet-bloc. The reference to the English-language publication reads as follows: Ref. 9: K. S. Rajan. J. Sci. Ind. Research (India), 12 B, 32 (1953); Chem.Abstr. 47, 7107i (1953); 13B 43, (1954); Chem. Abstr., 48 13178c (1954).

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S. M. Kirova
(Ural Polytechnic Institute imeni S. M. Kirov)

SUBMITTED: April 27, 1960

Legends to Tables 3-6: 1) Temperature, °C; 2) NaOH concentration, % by weight; 3) duration of experiment, hr; 4) degree of decomposition in %; 5) found in residue, mole; 6) phase condition of the products, a) very weak, b) weak, c) medium, d) clear, e) very clear.

Card 5/10

CHUKHLANTSEV, V.G.

Sparingly soluble arsenates and selenites considered in relation to the rule of series. Trudy Ural.politekh.inst.no.121:5-8 '62. (MIRA 16:5)

(Arsenates) (Selenites) (Solubility)

CHUKHLANTSEV, V.G.

Design of a high-voltage electrodialyzer. Zav.lab. 28 no.5: 628-629 '62. (MIRA 15:6)

1. Ural'skiy politekhnicheskiy institut imeni S.M.Kirova.
(Electrodialysis)

CHUKHLANTSEV, V.G.; POLEZHAYEV, Yu.M.

Reaction of [illegible]dium zirconium silicate with water under hydrothermal conditions. Zhur. neorg. khim. 9 no.6:1358-1362 Je '63 (MIRA 17:8)

1. Ural'skiy politekhnicheskiy institut imeni Kirova.

CHUKHLANTSEV, V.G.; MASHKOV, Yu.V.

Interaction of zircon with caustic alkalies under hydrothermal conditions. Zhur. neorg. khim. 9 no.6:1492-1493 Je'63
(MIRA 17:8)

1. Ural'skiy politekhnicheskoy institut imeni Kirova.

POLEZHAYEV, Yu.M.; CHUKHLANTSEV, V.G.

Interaction of sodium zirconsolicate with water. Zhur. neorg. khim. 9 no.5:1123-1128 My '64. (MIRA 17:9)

1. Ural'skiy politekhnicheskiy institut.